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CLAIMS

1. A method for producing a bag with a mouth member by melt-bonding a tubular mouth member comprising a thermoplastic resin and a bag unit comprising a flexible film, said method comprising preheating the tubular mouth member while rotating it around the  
5 cylinder axis thereof, inserting the heated mouth member into an opening part of the bag unit and pressing and thereby melt-bonding the mouth member to the opening part of the bag unit.
2. The method for producing a bag with a mouth member as claimed in claim 1,  
10 wherein the preheating is performed by radiant heat.
3. The method for producing a bag with a mouth member as claimed in claim 1, wherein in the course of inserting the heated mouth member into the opening part of the bag unit and pressing melt-bonding, the inside of the bag unit is decompressed by sucking  
15 out air inside the bag unit.
4. The method for producing a bag with a mouth member as claimed in claim 1, wherein the bag with a mouth member is produced by making a mouth member-rotator travel through a circuit of preheating wherein the mouth member is set on a mouth  
20 member-rotator and heated while rotating, and melt-bonding wherein said mouth member on the mouth member-rotator is melt-bonded to the opening part of a bag unit, cooled and removed together with the bag as a bag with a mouth member.
5. A bag with a mouth member produced by the production method of a bag with a  
25 mouth member claimed in any one of claims 1 to 4.

6. An apparatus for producing a bag with a mouth member by melt-bonding a tubular mouth member comprising a thermoplastic resin and a bag unit comprising a flexible film, said apparatus comprising a preheater for the mouth member, and a mouth member-rotator for rotating the heated tubular mouth member around the cylinder axis of said mouth member.

7. An apparatus for producing a bag with a mouth member by melt-bonding a tubular mouth member comprising a thermoplastic resin and a bag unit comprising a flexible film, said apparatus comprising a mouth member-rotator for rotating a tubular mouth member around the cylinder axis of said mouth member, a mouth member supplier for supplying and setting a mouth member to said rotator, a preheater for the rotating mouth member, a melt bonding device for inserting the heated mouth member into the opening part of a bag unit and pressing and, thereby, melt-bonding the mouth member and the opening part of the bag unit, a cooler for the melt-bonded bag with a mouth member, and a removing device for removing the cooled bag with a mouth member.

8. The apparatus for producing a bag with a mouth member as claimed in claim 6 or 7, wherein the mouth member-rotator comprises a support member for slidably supporting a mouth member, a support member basal end part for removably fixing the non-heated part of the mouth member to the support member, and a driven unit for rotating the mouth member.

9. The apparatus for producing a bag with a mouth member as claimed in claim 6 or 7, wherein the mouth rotator is fitted to be moved sequentially through a circuit of mouth

member supplying, preheating, melt-bonding, cooling, and removing the bag with a mouth member.

10. The apparatus for producing a bag with a mouth member as claimed in claim 6 or  
5 7, wherein the heat source of the preheater has a linear shape.

11. The apparatus for producing a bag with a mouth member as claimed in claim 6 or  
7, wherein the heat source of the preheater comprises a pair of opposing heat sources.

10 12. The apparatus for producing a bag with a mouth member as claimed in claim 6 or  
7, wherein the mouth member-rotator has a duct for sucking out the air inside the bag with  
a mouth member.